IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Arndt et al.**	§	Group Art Unit: **2159**
	§	
Serial No. **10/777,724**	§	Examiner: **Black, Linh**
	§	
Filed: **February 12, 2004**	§	Confirmation No.: **5919**
	§	
For: **Architecture and Method for Managing the Sharing of Logical Resources Among Separate Partitions of a Logically Partitioned Computer System**	§	Attorney Docket No.: **AUS920031060US1**

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REPLY BRIEF (37 C.F.R. 41.41)

This Reply Brief is submitted in response to the Examiner's Answer mailed on May 19, 2009.

No fees are believed to be required to file a Reply Brief. If any fees are required, I authorize the Commissioner to charge these fees which may be required to IBM Corporation Deposit Account No. 09-0447.

RESPONSE TO EXAMINER'S ANSWER

In section A.1.d. of the Appeal Brief, Appellant argued that "*Armstrong* does not disclose..."granting, by a server partition in the logical partitioned data processing system, a logical resource owned by the server partition to a client partition in the logical partitioned data processing system."

In response, the Examiner states the following:

> In response to the Appellants' above argument, Examiner disagrees. As cited in the Office Action on page 2, in figure 2, the primary partition (A) is equivalent to the server partition, the secondary/client partitions are (8), (C). Col. 5, lines 23-65 discloses "each logical partition 40-44 executes in a separate memory space, represented by virtual memory 60. Moreover, each logical partition 40-44 is statically and/or dynamically allocated a portion of the available resources in computer 1O... in some implementations resources can be reallocated on a dynamic basis to service the needs of other logical partitions ..."*When the server partition reallocates the resources based on the needs of other partitions, it allows other partitions to access to or utilize the new allocated resources meaning that it is "granting" the resources to the client partitions and the partitions can then utilize the allocated resources.* Therefore, resources can be shared between partitions based on needs. As shown in figure 2, the server/primary partition 40 contains the partition manager with the primary/server partition control item 50 and the shared service item 48. Address translation tables are provided in partition manager 46 to respectively handle the virtual to real address translation operations for logical partitions 40,42, and 44 respectively. Moreover, each processor 12 optionally includes a translation lookaside buffer (TLB) 32 or other cache structure that caches at least a portion of one or more address translation tables to accelerate the translation of virtual to real memory addresses, in a manner well known in the art. Therefore, it is not novel in the technological art that the client or the secondary partitions to do the mapping.

Examiner's Answer, May 19, 2009, pp. 11-12, emphasis added.

As explained in the Applicants Appeal Brief, col. 5, lines 23-65 describe actions that are performed by *Armstrong*'s partition manager 48. In light of the current claim language, wherein a server partition grants a logical resource owned by the server partition to a client partition, it is irrelevant that *Armstrong* teaches a system wherein partition manager 48 performs these functions.

The paragraphs cited by the Examiner illustrate exactly the Appellant's point of contention. In *Armstrong*, the server partition "*reallocates the resources based on the needs of other partitions.*" The cited section teaches that *Armstrong*'s partition manager 48 can allocate a portion of the available resources to one of logical partitions 40-44. *Armstrong*'s partition manager 48 can allocate a portion of the available resources to primary partition 40. *Armstrong*'s partition manager 48 can allocate a portion of the available resources to one of secondary partitions 42-44. However, *Armstrong*'s primary partition 40, which the Examiner equates to the Applicant's server partition, does not itself allocate a logical resource. The individual client partitions perform no affirmative actions. This is directly contrasted with the Appellants' claim 1, wherein mapping is not performed by a server partition, but rather by the client partition. This is clearly stated in claim 1, which is as follows:

The text of the claims involved in the appeal is as follows:

> 1. A method for managing shared resources in a logical partitioned data processing system, the method comprising:
>
> granting, by a server partition in the logical partitioned data processing system, a logical resource owned by the server partition to a client partition in the logical partitioned data processing system;
>
> communicating an identifier from the server partition to the client partition; and
>
> responsive to the client partition accepting the identifier, mapping the logical resource into a logical address space of the client partition, wherein the mapping is performed by the client partition.

As shown in section A.1.d. of the Appeal Brief, *Armstrong* discloses a known method for allocating resources within a logically partitioned data processing system. The cited paragraphs describe the traditional function of the partition manager, or hypervisor.

According to *Armstrong*'s Figure 2, the partition manager is indicated by reference number 46. A partition manager is not a *server partition* in the logical partitioned data processing system. This distinction is clear from *Armstrong*'s Figure 2, the supporting text, and *Armstrong*'s description of the hypervisor/partition manager. The partitions on the other hand are indicated by reference number 40-44. Primary partition 40 includes only enough partition management functionality to initiate processor resets of the other partitions in the event of a processor hang.

Primary partition 40 does not "grant" or allocate anything. Any granting of resources is done by partition manager 46.

Contrary to both the teaching of *Armstrong*, and the Appellants' own disclosure, the Examiner maintains that mapping of resources by *Armstrong*'s partition manager reads on claim 1's "mapping the logical resource into a logical address space of the client partition, wherein the mapping is performed by the client partition." This is simply not true. As shown, a partition manager is not a server partition, and it is *Armstrong*'s partition manager that performs any "mapping (of) the logical resource into a logical address space of the client partition," not the primary partition as maintained by the Examiner.

While the partition manager is initially responsible for allocation of resources between partitions, *Armstrong* stops here. Appellants' Claim 1 takes this one step further. Once a resource is allocated to a partition, the server partition is then allowed to share the resource with a client partition. The server partition then maps "the logical resource into a logical address space of the client partition."

A partition manager is not a partition, based on either of the Appellants' definition or that of *Armstrong*. *Armstrong* teaches that only the partition manager grants resources. *Armstrong*'s primary partition 40 includes only enough partition management functionality to initiate processor resets of the other partitions in the event of a processor hang, and does not perform a "mapping the logical resource into a logical address space of the client partition." Because *Armstrong* does not disclose the claim 1 feature of "mapping the logical resource into a logical address space of the client partition, wherein the mapping is performed by the client partition," *Armstrong* does not anticipate claim 1 under 35 USC 102(b).

CONCLUSION

As shown above, the Examiner has failed to state valid rejections against any of the claims. Therefore, Appellants request that the Board of Patent Appeals and Interferences reverse the rejections.

Dated: July 16, 2009

Respectfully submitted,

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